DOCUMENT RESUME

ED 324 883 EC 232 478

AUTHOR Parette, Howard P., Jr.; VanBiervliet, Alan
TITLE A Model for State Technology Planning in Response to Federal Mandate. Project TAARK.
INSTITUTION Arkansas Univ., Little Rock. Center for Research on Teaching and Learning.
SPONS AGENCY Arkansas Governor's Developmental Disabilities Planning Council, Little Rock.; Arkansas Univ., Little Rock. University-Affiliated Program.
PUB DATE 89
CONTRACT 06DD-0405/02; 89-554
NOTE 22p.
PUB TYPE Reports - Descriptive (141)

EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS Agency Cooperation; Assistive Devices (for Disabled); Consumer Economics; *Delivery Systems; *Disabilities; Federal Legislation; Information Systems; Models; Program Development; Program Evaluation; Program Implementation; *State Programs; *Statewide Planning; *Technology
IDENTIFIERS *Arkansas Technology Access Program; *Technology Access for Arkansans Project

ABSTRACT

The paper describes a state (Arkansas) planning process for delivering appropriate technology support services to citizens with disabilities as implemented in the TAARK (Technology Access for Arkansans) Project and the ARTAP (Arkansas Technology Access Program). The model focuses on active consumer involvement and a comprehensive service delivery system which utilizes a centralized information system, as well as regional and local points of entry. The system utilizes existing resources to minimize duplication of service efforts by agencies. It is also designed to follow up on persons with disabilities who enter the system, provide an ongoing analysis of needs of disabled persons, and conduct an evaluation of services. Topics discussed include federal technology legislation, the TAARK conceptual model, TAARK activities, the Consumer Committee, interagency coordination in planning, and consumer involvement in ARTAP implementation and evaluation. Includes 24 references. (DB)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)
This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.
Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY
Howard P. Parette
TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

ED324883

A Model for State Technology Planning in Response to Federal Mandate

Howard P. Parette, Jr.

Alan VanBiervliet

Center for Research on Teaching and Learning

University of Arkansas at Little Rock

Running Head: CONSUMER INVOLVEMENT

Project TAARK is funded in part by Grant No. 89-554 from the Arkansas Governor's Developmental Disabilities Planning Council, funded in part by the University of Arkansas at Little Rock, and funded in part by the University of Arkansas-University Affiliated Programs on Developmental Disabilities Grant No. 06DD-0405/02. However, the content does not necessarily reflect the position or policy of any of the aforementioned organizations, and no official endorsement of this publication should be inferred.

EC 233 478

A Model for State Technology Planning

in Response to Federal Mandate

Introduction

Technology exerts an important influence on the lives of all persons in our society by making life more comfortable, more fulfilling, and, in some cases, more frustrating. Though perceptions of the meaning and scope of technology vary, the Office of Technology Assessment (1982) has defined technology as those aids and devices "designed for and used by individuals with the intent of eliminating, ameliorating, or compensating (bypassing) one or more functional limitations of individuals" (p. 51). Using such a definition engenders a wide range of devices and services which, for persons with disabilities, are not only desirable, but necessary for optimal functioning.

The use of technology can diminish limitations and extend the abiities of persons with disabilities. Technology also can improve the match between the individual and his/her environment by serving important functional needs, such as a wheelchair for mobility; by making life less complex, such as automatic dialing phones; by making life safer, such as smoke alarms; and by making life more fulfilling, such as augmentative communication aids. The use of technology can also enable an individual with a disability to be successfully employed and contribute to the tax base. Public savings can also accrue by technology helping to prevent the occurrence of future disabling conditions and by enabling people to live in independent or semi-independent settings (Braddock, 1981; Jones, Conroy, Feinstein, & Lemanowicz, 1984: Murphy & Datel, 1976; Nihira, 1979; Templeman, Gage, & Fredericks, 1982; Wieck & Bruininks, 1980). When an individual's independence is increased through the provision of technology, costs to society and burdens to families are reduced (Center for Special Education Technology, 1989; VanBiervliet, 1988).

One issue that is paramount in the minds of those involved in policy making regarding the application of technology in the lives of persons with disabilities is the conceptualization of *appropriate technology*. In a general sense, appropriate technology for any particular individual

may span the entire continuum of costs and complexity possibilities, ranging from adaptive spoons, canes, walkers, and wheelchairs to highly sophisticated technologies such as computerized environmental control systems. Given the heterogeneous nature of technology needs for persons with disabilities, appropriate technology cannot be defined in the absence of the contextual parameters of *value* and *technical* considerations (Office of Technology Assessment, 1982). When these two dimensions are considered, technology may be deemed to be appropriate when its application is (a) in reaction to or in anticipation of delineated goals pertaining to problems or opportunities, (b) compatible with existing constraints, such as resources, and (c) culminates in desirable and sufficient outcomes having acceptable negative consequences or risks to parties at interest (Office of Technology Assessment, 1982). These appropriate parties at interest represent a diverse group as well, and include consumers, parents, health care professionals, government and private policymakers, school systems, and many other groups.

In order to develop methods for assuring the appropriate development and use of technologies, a need for coordinated and coherent system has been reported (Cavalier, 1988; Garner & Campbell, 1987; Enders, 1989; Mendelsohn, 1989; Office of Technology Assessment, 1982; Vanderheiden, 1987). In theory, the assurance of maximum effectiveness, efficiency, and relevance in the development and application of technologies requires the extensive involvement of those who use the technology--the consumers (Cavalier, 1989; Pfrommer, 1984). Unfortunately, consumer involvement in planning processes within any system is often minimized or nonexistent. Reasons for this lack of involvement are numerous, including existing prejudices toward persons with disabilities, the inclination of bureaucrats toward simplification of review processes, the negative outlooks of disabled persons themselves, the difficulty inherent in defining consumers, and the lack of knowledge about how to design the advisory mechanisms that consumers would fit into in order to insure optimum involvement and input (Cavalier, 1989; Office of Technology Assessment, 1982). Each of these areas have generated difficult questions for those involved in policy-making in recent years.

Federal Technology Legislation

A major shift in national policy regarding the importance of technology in the lives of persons with disabilities was reflected in the recent passage of P.L. 100-407, the *Technology*

Related Assistance for Persons With Disabilities Act of 1988. With the enactment of this monumental legisaltion, the federal government mandated its commitment for policies targeting systems changes designed to increase citizen awareness about assistive and adaptive technologies, to stimulate public and private services, and to help provide devices for persons with disabilities who need them. During fiscal year 1989, Congress has funded Title 1 of P.L. 100-407, the state grants program, at $5.1 million to facilitate the development of "consumer-responsive" programs in 7-9 states. States opting to participate in grant competition will be selected on a competitive basis and judged on their ability to plan comprehensive statewide programs that, among other activities, coordinate the state agencies with federal programs and public and private entities that provide technology-related assistance. Funds will provided to increase awareness, expand services to consumers, and to extend the effectiveness of activities funded through other sources. States are also required to determine which of their policies promote or inhibit technology assistance. Additionally, states must develop creative strategies for increasing the availability of funding; increase awareness and knowledge regarding the efficacy of technologies by consumers; and increase the capability of public and private entities to provide technology-related assistance, and to pay for their provision. The applications for the first round of P.L. 100-407 grants were released on May 24, 1989, with the first group of nine proposals being funded in October of 1989.

In examining the selection criteria published in the final regulations issued by the Secretary of Education, the inclusion of individuals with disabilities and their families or representatives was weighted higher than any other component of the grant review processes. Coordination among state, public, and private agencies and organizations resulting in the broad scale participation and exchange of information necessary to implement a statewide consumer-responsive program was also weighted highly.

Technology Access for Arkansans (TAARK) Project

Prior to the passage of P.L. 100-407, a cooperative grant development effort was initiated by six public and private agencies in Arkansas to address the technology needs of persons with disabilities. Via a 1-year grant through the Arkansas Governor's Developmental Disabilities

Planning Council and the University of Arkansas-University Affiliated Programs in Developmental Disabilities, the Technology Access for Arkansans (TAARK) Project was funded as a result of these early planning activities . The groups which were involved in the development of the grant included the University of Arkansas-University Affiliated Programs; Department of Human Services (DHS), Division of Rehabilitation Services; Association for Retarded Citizens/Arkansas; Arkansas Special Education Resource Center; Arkansas Children's Hospital-UAMS; and Arkansas Easter Seal Society.

Conceptual model. TAARK was designed to: (a) identify the need and quality of technology provisions in Arkansas, (b) disseminate information about appropriate technology and funding, (c) educate Arkansans about technology and advocacy, (d) develop a coordinated state plan for technology , and (e) provide technical assistance to the Developmental Disabilities Planning Council. In order to address each of the aforementioned goal areas, particularly with regard to development of a comprehensive state plan, a model was needed which would maximize the use of existing personnel and resources, as well as to insure the input of both consumers and professionals from various service delivery systems.

The TAARK model was based on a systems model developed by the West Virginia Rehabilitation Research and Training Center (1977), referred to as the Institute on Rehabilitation Issues (IRI) process. This process is actually a microsystem of a general model described by Havelock (1974), and has been critiqued by several earlier investgators (see Human Interaction Research Institute, 1976; Jolly, 1975). In the IRI paradigm, the publication of rehabilitation issues was the end product of the process, whereas, in the latter, the development of a comprehensive service delivery system was of paramount importance. The IRI process emphasizes the collective input of persons from many different agencies and programs so as to provide a wide range of perspectives, coupled with the use of study groups to examine issue areas and report to a planning committee. The process is essentially comprised of 14 activities which is depicted in Figure 1. The adaptation of this model which was utilized for state technology planning by the TAARK project is shown in Figure 2.

Insert Figures 1 and 2 about here

The receipt of a grant award for TAARK was important in that it provided the fiscal underpinning for extensive state technology planning efforts that ensued. In early November 1988, a Technology Steering Committee representing the six state, private, and consumer agencies and groups that developed the TAARK grant proposal, was organized and provided with information relevant to Public Law 100-407, the objectives of TAARK, and timelines for proposed activities. Since the federal legislation emphasized *both* consumer involvement and interagency cooperation and planning, the Technology Steering Committee decided to convene a larger planning group that would consist of individuals with disabilities, their families or representatives, representatives of state and private agencies, vendors, and other individuals as deemed appropriate.

Coordinated Planning Committee. A Coordinated Planning Committee was established on January 4, 1989, at a meeting which was jointly convened by TAARK and the DHS Division of Rehabilitation Services . This Planning Committee was the second phase of the adapted IRI model used by TAARK. The major thrust of the Coordinated Planning Committee was to develop a state plan for a consumer responsive statewide system of technology-related assistance, and to develop a grant application in response to P.L. 100-407.

Since only 3 of the 15 participants in the first meeting were individuals with disabilities, parents of children with disabilities or their representatives, the participants were requested to nominate at least two individuals with disabilities or parents to serve on the committee. At the next meeting, 10 (46%) of the 22 participants were individuals with disabilities, parents of children with disabilities, or their representatives. During this meeting, 6 study groups were organized to facilitate the acquisition of information relevant to TAARK project goals. As can be seen in Figure 1, the use of a prime study group in the IRI model activities was of major importance. In the TAARK model, six study groups were used, *each* being assigned a prime task for study. These study groups included Consumer Needs, Information Dissemination and Public Awareness, Legislation and Administrative Policies, National Service Delivery Models, Personnel Issues, and

Funding Issues (see Figure 2), and were chaired by the representatives of the 6 organizations constituting Project TAARK. Each of these groups met independently from January until March to collect information relevant to the issue area targeted by the study group, identify barriers to technology access in Arkansas, and to develop solutions to the barriers. As in the IRI model, each study group was charged with the development of a written document identifying problems and suggested solutions to those problems for its respective issue area. The TAARK Project Director was present at each of these study group meetings to facilitate the process and disseminate information regarding the activities and findings of other study groups.

The Coordinated Planning Committee was made up of 48 persons, who represented 25 public and private agencies. The committee met 7 times between January and July of 1989, and all meetings were well-attended with an average of 24 persons participating in each meeting. Nineteen (40%) of the members were persons with disabilities, parents of children with disabilities, or their representatives. Twelve (25%) of the participants were representatives of private non-profit organizations. Three (6%) individuals represented private businesses, such as assistive device vendors. Fourteen (29%) of the participants were employees of 12 state agencies. A few of the participants are counted twice in these figures, *e.g.*, 4 state agency employees were also persons with disabilities or parents of children with disabilities.

Early TAARK activities. A large part of the early meetings of the Coordinated Planning Committee was devoted to technology awareness and information sharing activities. National experts were hired to provide information on alternative approaches towards developing a statewide system of technology access, and to facilitate the planning process. On March 13, a Planning Conference was held for all study groups to ensure coordinated planning activities and to share information regarding forthcoming tasks. On March 22-23, a 2-day retreat was held at DeGray State Park Lodge to begin development of the grant application for P.L. 100-407 (Technology Access for Arkansans, 1989). At this conference, verbal reports were given by each study group regarding their findings in their designated issue areas. Similar to the activities of the IRI model wherein a draft document was critiqued at an annual meeting of the entire IRI group, suggestions and recommendations from the entire Coordinated Planning Committee with regard to these oral study group reports were solicited at the TAARK retreat.

Written reports were subsequently submitted and compiled as a document, *Proceedings from the DeGray Lodge Retreat*, that was made available to all Coordinated Planning Committee members as well as the public on request. This document incorporated all suggestions that were made by the entire Planning Committee at the DeGray Lodge Retreat. Four additional meetings of the Coordinated Planning Committee were held prior to the drafting of the state grant proposal, affording all participants with the opportunity to have input into its development. It is readily apparent how these activities parallel the first 8-9 activities of the IRI model (see Figure 1).

Throughout the TAARK planning activities, the involvement of individuals with disabilities, their families or representatives, and persons from the private sector were actively encouraged and facilitated. Inherent in the initial grant award was a budgetary allotment for stipends to support involvement of individuals with disabilities and their families at all planning meetings. As an example, prior to the March 22-23 meeting of the Coordinated Planning Committee held at DeGray Lodge, advance announcements were sent to all members indicating that stipend support would be provided in the form of babysitting and/or attendant reimbursement, as well as reimbursement for meals, lodging, and transportation. Individuals having access to a reimbursement mechanism via state or private agency were encouraged to utilize those resources. It was anticipated that such support would more readily facilitate the participation of consumers and parents who might have home responsibilities that typically inhibit such participation. It was found that this support did encourage participation, as 9 consumers, parents, and representatives (27%) constituted the makeup of the retreat meeting.

Consumer Committee. At the May 10, 1989, meeting of the Coordinated Planning Committee, a decision was made to establish a group of individuals with disabilities and parents of children with disabilities selected from the Coordinated Planning Committee to establish priorities for the Arkansas grant application for P.L. 100-407. This aspect of the TAARK planning process represented a unique conceptual divergence from the IRI model, as well as most known state planning models given the primary decision-making roles palyed by consumers in the design of a state technology plan.

The Consumer Committee which was charged with the task of identifying priorities for the state plan reflected a constituency of persons representing a variety of interest groups: a

chairperson with a visual impairment who also heads a independent living center that is funded under TitleVII Part B; a parent of a child with cerebral palsy who is on the Governor's Committee for Employment of the Handicapped; a parent of a multihandicapped child who also is active on a state level as a parent advocate; a parent of a deaf/blind child who is also the Chair of the Governor's Deaf/Blind Task Force; a person with learning disabilities who also serves on the National Learning Disabilities Advisory Board; a person with blindness employed as an executive with AT&T who is on a 2-year loan to the President's Committee for Employment for the Handicapped and serves on the Governor's Committee for Employment of the Handicapped; and an elderly person representing the aging population as a member of the Governor's Advisory Council on Aging. Initial data analyses of an extensive consumer survey (VanBiervliet & Parette, 1989a,b) were shared with the committee to assist it in its efforts to establish priorities.

The Consumer Committee met on numerous occasions in an effort to both prioritize technology goals for the proposed grant application, as well as to offer recommendations pertaining to methodologies for attaining those goals. The recommendations of this committee were presented to the Coordinated Planning Committee at its meeting on May 24. Subsequent meetings focused on methodological decision-making processes to deal with the priorities established by the Consumer Committee. A representative of the Consumer Committee was present at meetings of the Technology Steering Committee held on June 8 and June 14 to ensure that the integrity of their priorities and recommendations was maintained in the development of state plan methodologies.

Again, it should be reiterated that at all meetings of the Coordinated Planning Committee, subsequent to the organizational meeting on January 4, 1989, an average of 38% of participants were persons with disabilities or parents of persons with disabilities. This statistic supports the strong commitment in this planning process to facilitate maximum participation by persons with disabilities and their families in the design of a comprehensive technology state plan.

Consumer and professional needs survey. Consumer input was encouraged from across the state via the mechanism of a Consumer Survey designed to assess needs of users, or potential users of technology. The format for the survey instrument included multiple choice questions on specific technology-relevant issues, and open-ended items allowing consumers to

express their unique needs and to offer suggestions for those involved in the state planning processes. These suggestions were systematically recorded and compiled for the review of those establishing priorities for the state plan as well as those designing methodologies for the implementation of those priorities. In addition to the Consumer Survey, efforts were made during the information gathering phase of Project TAARK to secure the input of professionals via surveys from across the state regarding their views on technology-related needs.

Interagency coordination in planning. From the outset of the state technology planning activities, interagency participation on a broad level has been encouraged and facilitated. Involvement increased from the six initial members constituting Project TAARK to 48 persons representing 25 public and private groups/agencies, as well as persons with disabilities and their families.

One unique approach was undertaken in attempting to involve a cadre of individuals in TAARK activities during the state planning phase of the project. It was discovered in February 1989 that the Arkansas State Highway and Transportation Department was preparing to undertake an extensive survey to determine the transportation needs of citizens with special needs across the state as a component of its 5-year planning activities. TAARK personnel cultivated a collaborative working relationship with the Planning Division of this state agency. This relationship enabled information of value to both TAARK and the Highway Department to be obtained and shared. Due to this cooperative working relationship, the Highway Department subsidized a significant portion of the costs for a statewide survey of persons with disabilities which was conducted prior to this grant submission.

Issues of Consumer Involvement

The private sector lags considserably behind in responding to issues impacting upon technology and persons with disabilities, resulting in the government assuming a leadership role in this domain (Cavalier, 1988; Office of Technology Assessment, 1982; Pfrommer, 1984). A greater number of qualified consumers are needed to assist in solving this problem at all levels of planning and decision-making. It has been suggested that qualified consumers are persons who (a) have a disability, (b) possess social maturity, (c) use technical products and services, (d) participate in consumer organizations or demonstrate good contact with the community of persons

with disabilities, (e) represent the point of view of a sizeable number of persons with varying disabilities (being aware of a variety of lifestyles and experiences), and (f) possess a working knowledge of the area in which they are participating (Pfrommer, 1984).

The inclusion of individuals with disabilities and their families or representatives in the development of the state technology plan and in the assessment of needs was one of the driving elements in the planning phases grant application development process in Arkansas. In response to consumer input, the first item listed in the Division of Rehabilitation Services' mission statement for the comprehensive system, known as the Arkansas Technology Access Program (ARTAP), is ensuring active, timely, and meaningful participation by individuals with disabilities and their families or representatives, and other appropriate individuals with respect to performing functions and carrying activities under the grant. As consumer involvement in the planning process increased during the early months of planning the state technology system, the significance of the expertise of consumer participants and their potential to direct the planning efforts came clearly into focus, culminating in their identification of the priorities for the state grant application.

Consumer involvement in ARTAP implementation and evaluation. The involvement of persons with disabilities, their families and representatives is a strong component of the evaluation activities of the program's goals and objectives. One of the principal priorities established by the Consumer Committee was the recommendation that an on-going consumer review panel be developed within the comprehensive state plan. The plan calls for the Deputy Director of the Division of Rehabilitation Services to be directly responsible for appointing an Arkansas Technology Access Program (ARTAP) Advisory Council. This council will consist of 15 individuals of which 9 (60%) will be persons with disabilities and parents or representatives of groups of persons with disabilities. An attempt will be made during the appointment process to select a group of persons who will, to the greatest extent possible, represent the various groups of persons with disabilities across the state.

The specific responsibilities of the Advisory Committee will include advising the Division of Rehabilitation Services Deputy Director, making recommendations regarding overall project development, reviewing the Requests for Proposals (RFPs) for specific technology services, *i.e.*, specialized technology access centers (TACs) strategically located across the state,

and gathering and reviewing evaluation data and reports.

Persons involved with the six Technology Access for Arkansans (TAARK) project study groups described previously will continue to be involved throughout the implementation of the grant. These study groups are composed of a variety of consumers, parents, professionals, etc. The study groups will submit reports periodically to the ARTAP Advisory Council on an on-going basis for consideration and review, focusing on consumer issues, funding mechanisms, activities of national models for technology service delivery, personnel issues, information dissemination and public awareness, and legislation and administrative policies. Such reports will serve to provide supplementary monitoring and evaluation information to the Deputy Director, ARTAP Program Director, and the ARTAP Advisory Council. Additionally, the ARTAP Advisory Council members will make informal contacts with consumers of technology throughout the state. These contacts will be initiated by consumers. The names, addresses, and telephone numbers of ARTAP Advisory Council members will be provided as public information through newsletters, surveys, and other mechanisms, such that direct contact can be made with these board members by consumers.

Consumer involvement in the evaluation and assessment process will also be insured through a variety of public and private organizations who host public forums annually such that input may be gained from consumers and families regarding the quality of technology services provided in the state. These open forums are included in the meetings of such diverse groups as the Governor's Developmental Disabilities Planning Council, the Coalition for the Handicapped, the Division of Rehabilitation Services, and the Association for Retarded Citizens/Arkansas. Additionally, a statewide Annual Technology Conference will be held in conjunction with ARTAP implementation processes, providing a primary mechanism for consumers and professionals alike to identify barriers toward attainment of ARTAP goals as well as to generate solutions to such barriers. Reports of identified barriers will also be submitted to the TAARK on-going Study Groups for evaluation and problem-solving.

Another means of evaluating implementation efforts of ARTAP will be through the use of evaluation forms provided to each consumer accessing the Technology Information System (TIS) at the various Technology Access Centers (TACs). Each consumer who is provided with a

service from these centers will be encouraged to evaluate their satisfaction with both that TAC, but also with the overall system.

During the third year of the grant, comprehensive statewide consumer and professional surveys will be prepared, disseminated, and analyzed to determine the impact of the ARTAP project. The survey instruments will be designed by a team of consumers and professionals. These surveys will include all persons who have accessed the TIS and TACs as well as persons who are members of various professional and consumer organizations that are identifiable via available mailing lists acquired by TIS personnel.

Also, service recipients would be made aware of ARTAP grievance processes on their initial entry into the system. Since needs assessments are an ongoing activity demonstrated by many public and private agencies/groups, TIS personnel will insure that many of these annual needs assessments, *e.g.*, Division of Rehabilitation Services, Governor's Developmental Disabilities Planning Council, Division of Aging and Adult Services, etc., will contain questions having bearing on the TIS. At the beginning of the third year of the ARTAP implementation phase, a comprehensive needs assessment will be conducted utilizing all persons who have accessed the ARTAP program, as well as consumers and professionals who are members of a variety of organizations that would provide mailing lists of their membership rosters. A critical facet of this comprehensive needs assessment would be levels of satisfaction with the ARTAP system.

Conclusion

The state planning process herein described is unique in design and incorporates elements of design proposed by several technology advocates (Hobson, 1989; Pfrommer, 1984; Vanderheiden, 1987). It focuses on active consumer involvement in recognition of the valuable expertise which consumers bring to the planning process, since they are the ones who benefit from the service delivery system and, as such, are the most appropriate to assist in developing the system. The process entails the development of a comprehensive service delivery system which requires a centralized information system, as well as regional and local points of entry into the system, with all entry points being linked to one another such that information flows both outward from the central system and inward from the peripheral service sites. The system utilizes existing

resources in a manner which is unprecedented in Arkansas, thereby minimizng the duplication of service efforts by agencies. This is insured by the involvement of individuals across many disciplines who all share a common need for information relating to technology and technology-related services. The system is also designed to follow-up on persons with disabilities who enter the system and to follow these persons throughout the course of their lives as they continue to access the system. Finally, the system is designed for not only for an ongoing analysis of needs of persons with disabilities, but an evaluation of the services provided by the system in response to those who access it. It should be noted that the use of this process resulted in an award of funding under P.L. 100-407 for Arkansas, with reviews from grant readers reflecting extremely positive perceptions of the process.

There is definitely a need for the development of technology support systems within all states in order for persons with disabilities to be afforded the opportunity to take advantage of the newer technologies which are being developed (Vanderheiden, 1987). Developing and implementing such systems, however, will be an individual matter for the states to grapple with as needs and resources will vary across the country. The focus of the system, and the planning activities which underpin it, should be on support as opposed to the distribution of technology, with an emphasis on information, training, and specialized evaluation. It is hoped that the process herein described will provide a model for other states which are endeavoring to pursue funding under the new legislation.

References

Braddock, D. (1981). Deinstitutionalization of the retarded: Trends in public policy. *Hospital and Community Psychiatry, 32*, 607-615.

Cavalier, A. (1988). *Technology assistance: Devices, techniques, and services for people with cognitive impairments*. Testimony to the Select Subcommittee on Education of the Committee on Education and Labor of the U.S. House of Representatives. Arlington, TX: Association for Retarded Citizens.

Cavalier, A. (1989, May). *Ethical Issues Related to technology*. Paper presented to the Pre-conference for the Association for Retarded Cittizens/ARK 1989 Annual Conference, Little Rock, AR.

Center for Special Education Technology. (1989). Special Edition: P.L. 100-407. *The Marketplace, Spring*, 1-4.

Enders, A. (1989, March). *Information issues and options*. Paper presented to the National Workshop on Implementing Technology Utilization, Washington, DC.

Garner, J. B., & Campbell, P. H. (1987). Technology for persons with severe disabilities: Practical and ethical considerations. *Journal of Special Education, 21*, 122-132.

Havelock, R. G. (1974). *Ideal systems for research utilization: Four alternatives*. Washington, DC: Social and Rehabilitation Services, U.S. Department of Health, Education, and Welfare.

Hobson, D. (1989, March). *Planning today for tomorrow*. Paper presented to the Technology Access for Arkansans, DeGray Lodge Retreat. Lake DeGray, Arkansas.

Human Interaction Research Institute. (1976). *Putting knowledge to use: A distillation of the literature regarding knowledge transfer and change*. Los Angeles: Author.

Jolly, J. A. (1975). *Technology transfer in research and development*. Monterey, CA: Naval Postgraduate School.

Jones, P. A., Conroy, J. W., Feinstein, C. W., & Lemanowicz, J. E. (1984). A matched comparison study of cost effectiveness: Institutionalized and deinstitutionalized people. *Journal of the Association for Persons with Severe Handicaps, 9*, 304-313.

Mendelsohn, S. (1989, March). *Payment issues and options in the utilization of assistive technology*. Paper presented to the National Workshop on Implementing Technology Utilization, Washington, DC.

Murphy, J. G., & Datel, W. E. (1976). A cost-benefit analysis of community versus institutional living. *Hospital and Community Psychiatry, 27*, 163-176.

Nihira, L. (1979). *Costs for care of matched developmentally disabled clients in three settings*. Pomona, CA: University of California, Los Angeles, Neuropsychiatric Institute Research Group at Lanteran State Hospital.

Office of Technology Assessment, Congress of the U.S. (1982). *Technology and handicapped people*. New York: Springer.

Pfrommer, M. C. (1984). Utilization of technology: Consumer perspective. In *Discovery '84: Technology for disabled persons. Conference papers* (pp. 237-242). Menomonie, WI: Stout Vocational Rehabilitation Institute.

Technology Access for Arkansans (1989). *Proceedings from the DeGray Lodge Retreat, March 22-23, 1989*. Little Rock, AR: University of Arkansas at Little Rock.

Templeman, D., Gage, M. A., & Fredericks, H. D. (1982). Cost effectiveness of the group home. *Journal of the Association for Persons with Severe Handicaps, 6*, 11-16.

VanBiervliet, A. (1988). *Technology access for Arkansans*. Grant submitted to the Arkansas Governor's Developmental Disabilities Planning Council.

VanBiervliet, A., & Parette, H. P., Jr. (1989). Consumer and professional involvement in technology planning: A state's response to Public Law 100-407. In Georgia Institute of Technology (Ed.), *Second Southeast Regional Conference on State-of-the-Art Assistive Technology for Persons with Disabilities: Conference Proceedings*. Atlanta, GA: Georgia Institute of Technology. (a)

VanBiervliet, A., & Parette, Jr., H. P. (1989). *Consumer and professional technology needs: An exploratory investigation of Arkansans with disabilities*. Manuscript submitted for publication. (b)

Vanderheiden, G. C. (1987). *Issues in planning a state-wide technology service delivery program for special education*. Madison, WI: Trace Center, University of Wisconsin-Madison.

West Virginia Rehabilitation Research and Training Center. (1977). *Utilization of publications of the Institute on Rehabilitation Issues.....1977*. Morgantown, W.VA: Author.

Wieck, C. A., & Bruininks, R. H. (1980). *The cost of public and community residential care for mentally retarded people in the United States*. Minneapolis: University of Minnesota, Department of Educational Psychology.

Figure Caption

Figure 1. Institute on Rehabilitation Issues (IRI) process.

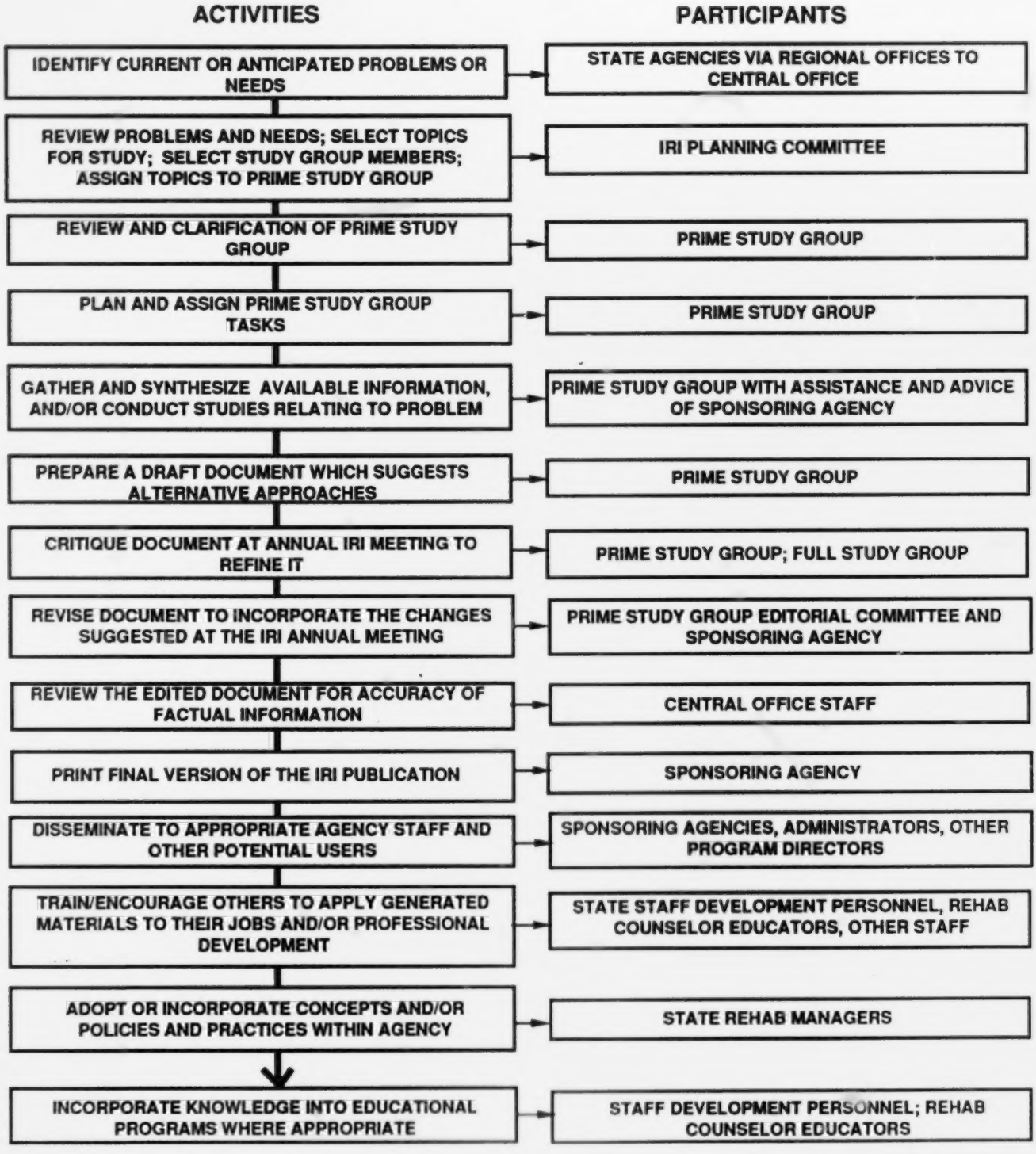
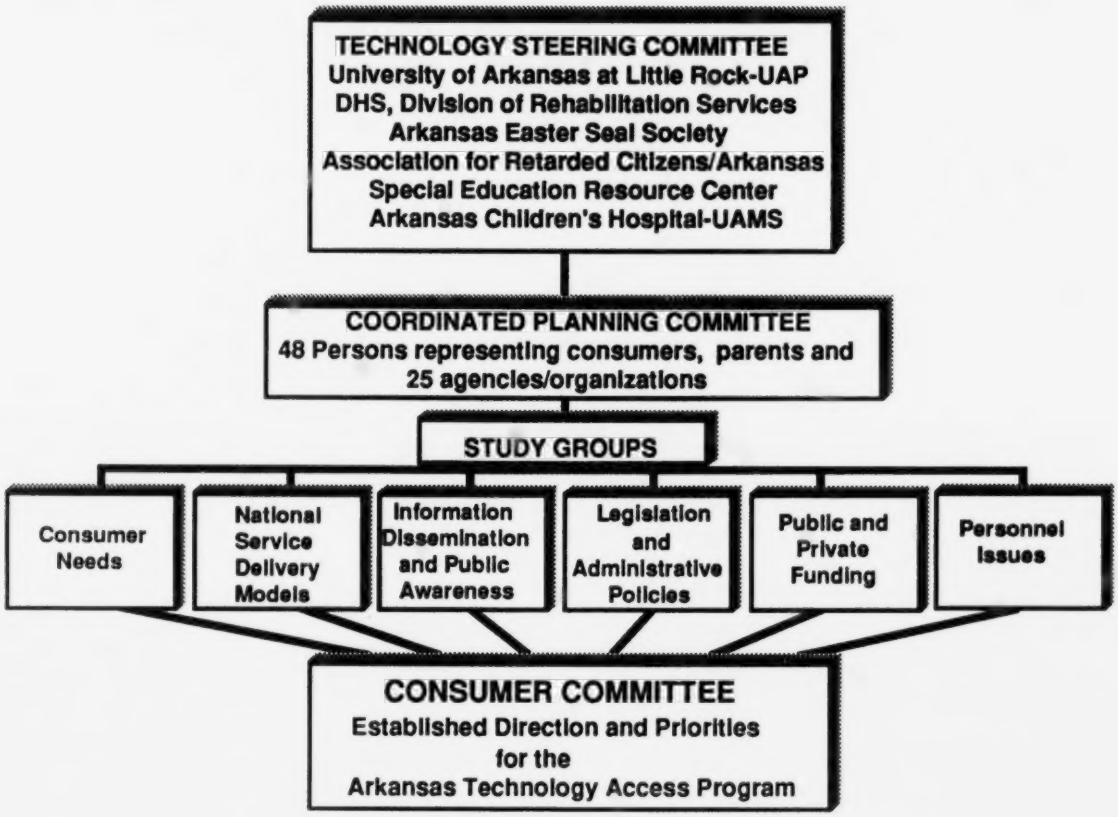

ACTIVITIES
PARTICIPANTS
IDENTIFY CURRENT OR ANTICIPATED PROBLEMS OR NEEDS
STATE AGENCIES VIA REGIONAL OFFICES TO CENTRAL OFFICE
REVIEW PROBLEMS AND NEEDS; SELECT TOPICS FOR STUDY; SELECT STUDY GROUP MEMBERS; ASSIGN TOPICS TO PRIME STUDY GROUP
IRI PLANNING COMMITTEE
REVIEW AND CLARIFICATION OF PRIME STUDY GROUP
PRIME STUDY GROUP
PLAN AND ASSIGN PRIME STUDY GROUP TASKS
PRIME STUDY GROUP
GATHER AND SYNTHESIZE AVAILABLE INFORMATION, AND/OR CONDUCT STUDIES RELATING TO PROBLEM
PRIME STUDY GROUP WITH ASSISTANCE AND ADVICE OF SPONSORING AGENCY
PREPARE A DRAFT DOCUMENT WHICH SUGGESTS ALTERNATIVE APPROACHES
PRIME STUDY GROUP
CRITIQUE DOCUMENT AT ANNUAL IRI MEETING TO REFINE IT
PRIME STUDY GROUP; FULL STUDY GROUP
REVISE DOCUMENT TO INCORPORATE THE CHANGES SUGGESTED AT THE IRI ANNUAL MEETING
PRIME STUDY GROUP EDITORIAL COMMITTEE AND SPONSORING AGENCY
REVIEW THE EDITED DOCUMENT FOR ACCURACY OF FACTUAL INFORMATION
CENTRAL OFFICE STAFF
PRINT FINAL VERSION OF THE IRI PUBLICATION
SPONSORING AGENCY
DISSEMINATE TO APPROPRIATE AGENCY STAFF AND OTHER POTENTIAL USERS
SPONSORING AGENCIES, ADMINISTRATORS, OTHER PROGRAM DIRECTORS
TRAIN/ENCOURAGE OTHERS TO APPLY GENERATED MATERIALS TO THEIR JOBS AND/OR PROFESSIONAL DEVELOPMENT
STATE STAFF DEVELOPMENT PERSONNEL, REHAB COUNSELOR EDUCATORS, OTHER STAFF
ADOPT OR INCORPORATE CONCEPTS AND/OR POLICIES AND PRACTICES WITHIN AGENCY
STATE REHAB MANAGERS
INCORPORATE KNOWLEDGE INTO EDUCATIONAL PROGRAMS WHERE APPROPRIATE
STAFF DEVELOPMENT PERSONNEL; REHAB COUNSELOR EDUCATORS

Figure Caption

Figure 2. TAARK state technology planning process.


TECHNOLOGY STEERING COMMITTEE
University of Arkansas at Little Rock-UAP
DHS, Division of Rehabilitation Services
Arkansas Easter Seal Society
Association for Retarded Citizens/Arkansas
Special Education Resource Center
Arkansas Children's Hospital-UAMS
COORDINATED PLANNING COMMITTEE
48 Persons representing consumers, parents and
25 agencies/organizations
STUDY GROUPS
Consumer Needs
National Service Delivery Models
Information Dissemination and Public Awareness
Legislation and Administrative Policies
Public and Private Funding
Personnel Issues
CONSUMER COMMITTEE
Established Direction and Priorities
for the
Arkansas Technology Access Program